

Message Text

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PAGE 01 BUCAR 04125 131500Z

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ACTION EUR-12

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P 131350Z JUL 76

FM AMEMBASSY BUCHAREST

TO SECSTATE WASHDC PRIORITY 8814

ERDA HQ WASHDC

ERDA HQ GERMANTOWN

S E C R E T BUCHAREST 4125

E.O. 11652: GDS

TAGS: ENRG, EEWT, RO, US

SUBJ: US/ROMANIAN NUCLEAR COOPERATION: PROPOSED GENERAL
ATOMIC HOT CELL FOR INSTITUTE OF NUCLEAR TECHNOLOGIES

REF : (A) BUCHAREST 3375, (B) STATE 091568, (C) URSU/

SIEVERING MEMCON, 5/7/76

1. ALEXANDRU OLARIU CALLED SCIATT TO STAAD COMMITTEE
FOR NUCLEAR ENERGY JULY 8 AND PRESENTED FOLLOWING STATE-
MENT AND LIST OF INTENDED USES FOR GA HOT CELL. DOCU-
MENT WAS INADVERTENTLY UNDATED AND UNSIGNED.

2. BEGIN TEXT: THE STATE COMMITTEE FOR NUCLEAR ENERGY,
ACTING FOR THE SOCIALIST REPUBLIC OF ROMANIA, HEREBY
PROVIDES A STATEMENT REGARDING THE CAPABILITIES AND
INTENDED USE OF THE INSTITUTE OF NUCLEAR TECHNOLOGIES'
HOT CELL FACILITY.

THE HOT CELL FACILITY, CURRENTLY IN THE ADVANCED
STAGES OF PLANNING, IS SPECIFICALLY DESIGNED FOR THE
CONDUCT OF POST-IRRADIATION EXAMINATION CAMPAIGNS OF
IRRADIATED POWER REACTOR FUEL SPECIMENS AND PROTOTYPE
POWER REACTOR FUELELEMENTS. THE FACILITY IS NOT DESIGNED
NOR IS IT SUITABLE FOR THE EXTRACTION OF MEANINGFUL
QUANTITIES OF PLUTONIUM OR FOR CHEMICAL REPROCESSING OF
IRRADIATED FUEL. COERCION TO SUCH USE WOULD BE VERY

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PAGE 02 BUCAR 04125 131500Z

DIFFICULT AND WOULD COMPLETELY FRUSTRATE ONE OF THE KEY

OBJECTIVES OF THE NATIONAL NUCLEAR POWER PROGRAM OF ROMANIA - NAMELY THE EARLY ESTABLISHMENT OF AN INDIGENOUS POWER REACTOR FUEL ELEMENT FABRICATION CAPABILITY.

THE HOT CELL FACILITY IS BEING DESIGNED FOR AND WILL BE INITIALLY EQUIPPED TO CARRY OUT THE NON-DESTRUCTIVE AND DESTRUCTIVE EXAMINATION AND TESTING ACTIVITIES LISTED BELOW:

- FUEL BUNDLE DISASSEMBLY (FIXTURES AND CUTTING TOOLS);
- FUEL ROD EXAMINATION AND PHOTOGRAPHY (PERISCOPE AND CAMERA);
- NEUTRON RADIOGRAPHY (

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TOR NEUTRON SOURCE,

- COLIMATOR AND FOIL CASSETTES);
- GAMMA SCANNING (COLIMATOR, OUT OF CELL DETECTORS AND GAMMA SPECTROMETER);
- DIMENSIONAL MEASUREMENT (FIXTURES AND GAUGES);
- PROFILEROMETRY (FIXTURES AND LINEAR TRANSDUCERS);
- CLADDING TESTS (EDDY-CURRENT DEVICE);
- TUBE BURET TESTING (HYDROSTATIC MACHINE);
- TENSILE TESTING (INSTRON TESTING MACHINE);
- FISSION GAS RELEASE (TUBE PUNCTURING EQUIPMENT, COUNTING EQUIPMENT, GAS CHROMATOGRAPH);
- FUEL ROD SELECTION, & (ABRASIVE WHEELS);
- X METALLOGRAPHIC SAMPLE PREPARATION '

VACUUM OVEN

- GRINDING AND POLISHING EQUIPMENT, ULTRASONIC CLEANERS AND CATHODIC ETCHING);
- METALLOGRAPHIC EXAMINATION (REMOTE METALLOGRAPH, ELECTRON MICROSCOPE, MICROHARDNESS, TESTER, AND AUTORADIOGRAPHY EQUIPMENT);
- BURN-UP ANALYSIS (UO₂ DISSOLUTION AND RADIOCHEMICAL ANALYSIS).

THE ABOVE OPERATIONS WILL BE CARRIED OUT INITIALLY

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UNENRICHED UO₂ AND SLIGHTLY ENRICHED UO₂ FUELS TYPICAL OF CANDU

AND PWR REACTOR FUEL ELEMENTS. ULTIMATELY IT IS FORESEEN THAT MIXED-OXIDE FUELS (MOX) AND FULLY ENRICHED FUELS WILL BE REQUIRED.

SECRET

PAGE 03 BUCHAR 04125 131500Z

UO₂ (HTGR) SAMPLES WILL BE EXAMINED IN THE HOT CELL FACILITY. END TEXT.

3. WHEN QUESTIONED, OLARIU SAID A) THE HOT CELL'S USAGES MIGHT BE EXTENDED BUT IF SO WOULD CONFORM TO TESTING PROGRAM ALREADY APPARENT FROM THE PRESENT LIST; B) IN CASE PLUTONIUM WERE TO BE EXTRACTED, THE AMOUNTS WOULD BE INSIGNIFICANT AND ERDA WOULD BE NOTIFIED; AND C) GPRJ

IF SIGNIFICANT

QUANTITIES OF PLUTONIUM WERE EVER TO BE
EXTRACTED, "NO MATTER HOW UNLIKELY THIS CASE IS," ERDA
WOULD BE NOTIFIED WELL IN ADVANCE.

4. IN ANSWER TO OTHER QUESTIONS, OLARIU AGREED THE LIST
WAS OPENENDED AND THE STATEMENT ITSEPG NO ALKFITING:9
AND THEN REPEATED WELL KNOWN POS
BION THAT ROMANIA
WAS NOT IN POSITION TO ACCEPT PRINCIPLE OF FOREIGN
VETO EXCEEDING CRITERIA OF NPT. INSTEAD, HE TRIED TO
MAKE POINT THATNOHE LOGIC OF SITUATION SURROUNDING HOT
CELL'S PURPOSE, AS WELL AS ITS PHYSICAL CAPA8)8583 ,
WERE SUFFICIENT TO GUARANTEENMOMANIA'S FACTUAL COMPLI-
ANCE WITH INTENT OF ERDA END-USE STATEMENT; I.E. A)
RL
ROMANIA'S NUCLEAR POWER PROGRAM REQSQRED THIS HOT CELL
FOR TESTING AND THEREFORE IT WOULD NOT BE CONVERTED FOR
PLUTANIUM EXTRACTION, AND B) CONVERSION WOULD BE IM-
PRACTICAL ON TECHNICAL GROUNDS ALONE BECAUSE AMOUNT OF
PLUTONIUM EXTRACTABLE IN THE FACILITY WOULD BE INSIGNIFICANT.

5. OLARIU ENDED HIS REMARKS WITH OBSERVATION TPTT
SCNE'S DEADLINE FOR COMMERICAL DECISION ON GA HOT CELL
WAS JUNE 31 AND COULD NOT BE DELAYED NOW MORE THAN A
FEW WEEKS. HE SAID HE DID NOT RECALL THE EXACT WORDS
ERDA OFFICIALS USED IN WASHINGTON BUT DID SAY SCNE
AWAITED REPLY WHETHER SOME COMBINATION OF "PUBLIC
AND PRIVATE ASSURANCEYTZ COULD NOT BE WORKED OUT, OR
SOME OTHER FORMULA PROPOSED (REF C).

6. SCNE PRESIDENT URSU TOLD AMBASSAEHU JULY 9 HE WAS
CRITICIZED AT HIGH LEVELS SINCE HIS RETURN FROM US
SECRET

SECRET

PAGE 04 BUCAR 04125 131500Z

FOR FAILURE TO RECEIVE PROMISED REPLIES FROM ERDA ON
HOT CELL FORMULATION. HE ASKED AMBASSADOR TO INVESTIGATE
THE PROBLEM ON URGENT BASIS WHILE IN WASHINGTON, ESPECIALLY
AS ROMANIA HAD CURRENT BIDS FROM FRNEHC, UK, FEDERAL
GERMAN REPUBLIC, AND SWEDEN WHICH HE WAS OBLIGED TO
ANSWER WITHIN NEXT TWO OR THRE WEEKS.

7. WE WOULD WELCOME GUIDANCE FROM WASHINGTON WHICH WOULD
AT MINIMUM SERVE TO KEEP GENERAL ATOMIC IN COMPETITIOF
ON THIS PROJECT AND WOULD FURTHER APPRECIATE REPORT ON
DISCUSSIONS AMBASSADOR BARNES WILL HAVE TOUCHING ON HOT
CELL DURING HIS CONSULTATIONS JULY 16-23.
SCISSORS

NOTE BY OCT: DISTRIBUTION PER MR. OTTO, S/S-O. FURTHER

NOTE: TEXT AS RECEIVED; CORRECTION TO FOLLOW.

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